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MARTINE PENILLA & GENCARELLA, LLP
710 LAKEWAY DRIVE
SUITE 200
SUNNYVALE, CA 94085

EXAMINER

BURLESON, MICHAEL L

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/099,887	FUKASAWA, KENJI	
	Examiner	Art Unit	
	Michael Burleson	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-30 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/25/03, 11/18/04.</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted was on 03/25/2003 and 11/18/2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

1. Claim 6 is objected to because of the following informalities:
2. Regarding claim 6, "claims 5" should read, -- claim 5 --.
3. Regarding claim 25, "event that that" should read, -- event that --.
4. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Regarding claims 23-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The color space converting program claimed is merely a set of instructions per se. Since the image processing program is merely a set of instructions not embodied on a computer readable medium to realize the computer program functionality, the claimed subject matter is non-statutory. See MPEP 2106 IV.B.1.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 recites the limitation "the achromatic color of the second color space" and "the achromatic color of the first color space" in page 41, lines 25-27. There is insufficient antecedent basis for this limitation in the claim.

3. Claims 7,8,11,22,27 recites the limitation " the color value of the white point of a first color space" and "the white point of a second color space" in page 42, lines 9-11, page 43,lines 2-4, page 43,lines 27-29, page 49,lines 18-19,page 52,lines 20-23. There is insufficient antecedent basis for this limitation in the claim.

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4. Claims 16,17 recites the limitation "the white point in a first RGB" and "the white point in a second RGB" in page 46,lines 4-7, page 47,lines 17-19. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 21 recites the limitation "the color value of a first white point" and "the color value of the white point" in page 48,lines 27-29. There is insufficient antecedent basis for this limitation in the claim.
6. Claims 9,10,12,18 and 19 are rejected for relying upon a rejected independent claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,4-6,8-10,13-15,20,21,23-25 and 27-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Hidaka US 6320980.
3. Regarding claim 1, Hidaka teaches of a color space converting apparatus (image processing (500)) for converting a color value of a first color space to a color value of a second color space, said color space converting apparatus comprises: a first color

space converting mechanism for converting the first color space color value to the second color space color value so as to eliminate deviation of converted a color value derived by converting the color value of the white point of the first color space to the second color space and the color value of the white point of the second color space (column 9,lines 44-67).

4. Regarding claim 4, Hidaka teaches of a color space converting apparatus according to any one of claims 1 to 3 wherein the first color space and second color space are device-dependent color spaces dependent on a device and a first color value of a device-independent color space, derived by converting the color value of the white point of the first color space, is equal to a second color value of the device-independent color space, derived by converting the color value of the white point of the second color space (column 9,lines 58-667 and column 10,lines 3-10 and 30-38).

5. Regarding claim 5, Hidaka teaches of a color space converting apparatus (image processing apparatus (500)) for converting a color value of a first color space to a color value of a second color space (column 9,lines 38-41 and 46-50), said color space converting apparatus comprising: color space converting means for performing a matrix operation to convert a color value of the first color space to a color value of the second color space (column 10,lines 3-30); deviation calculating means for calculating deviation of the color value of the achromatic color of the second color space with respect to a converted color value of the second color space, derived by executing the matrix operation of the color value of the achromatic color of the first color space (column

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10,lines 30-42); and conversion accuracy improving means for reflecting the calculated deviation to improve color space conversion accuracy (column 10,lines 38-65).

6. Regarding claim 6, Hidaka teaches the first color space and second color space are device-dependent color spaces dependent on a device and a first color value of a device-independent color space, derived by converting the color value of the achromatic color of the first color space, is equal to a second color value of the device-independent color space, derived by converting the color value of the achromatic color of the second color space (column 9,lines 58-667 and column 10,lines 3-10 and 30-38).

7. Regarding claim 8, Hidaka teaches a color space converting apparatus (image processing apparatus (500)) for matching the color value of the white point of a first color space with the color value of the white point of a second color space in a device-independent color space that is independent of any device, and converting a color value of the first color space to a color value of the second color space (column 9,lines 44-67), said color space converting apparatus comprising: color space converting means for converting a color value of the first color space to a color value of the second color space using a third matrix created on the basis of a first matrix for converting a color value of the first color space to a color value of the device-independent color space and a second matrix for converting a color value of the second color space to a color value of the device-independent color space (column 10,lines 3-30 and 43-65); deviation calculating means for calculating deviation of the color value of the achromatic color of the second color space with respect to a converted color value converted from the color value of the achromatic color of the first color space to a color value of the second color

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space by means of the converting means (column 10, lines 30-42); and conversion accuracy improving means for reflecting the calculated deviation to improve color space conversion accuracy (column 10, lines 38-65).

8. Regarding claim 9, Hidaka teaches the conversion accuracy improving means reflects the deviation and corrects the color value converted to a color value of the second color space (column 10, lines 38-65).

9. Regarding claim 10, Hidaka teaches the conversion accuracy improving means reflects the deviation and corrects the third matrix to improve the conversion accuracy (column 10, lines 38-65).

10. Regarding claim 13, Hidaka teaches of a color space converting apparatus (image processing apparatus (500)) for converting a color value of a first color space to a color value of a second color space (column 9, lines 44-67), said color space converting apparatus comprising: first converting means for converting a color value of the first color space to a color value of a device-independent color space using a first matrix (column 9, lines 45-50); second converting means for converting a color value of the second color space to a color value of the device-independent color space using a second matrix (column 9, lines 58-60); determining means for determining whether the color value of a first white point in the device-independent color space, converted from the color value of the white point of the first color space by the first converting means, matches the color value of a second white point in the device-independent color space, converted from the color value of the white point of the second color space by the second converting means (column 9, lines 58-67 – column 10, lines 1-3); third converting

means for converting a color value of the first color space to a color value of the second color space using a third matrix created on the basis of the first matrix and the second matrix (column 10, lines 3-10); deviation calculating means that, in the event it is determined that the color value of the first white point and the color value of the second white point match, calculates deviation of the color value of the achromatic color of the second color space and a converted color value that has been converted by the third converting means from the color value of the achromatic color of the first color space to a color value of the second color space (column 10, lines 30-42); and conversion accuracy improving means for improving color space conversion accuracy by the third converting means on the basis of the calculated deviation (column 10, lines 38-65).

11. Regarding claim 14, Hidaka teaches a first correcting means that, in the event it is determined that the color value of the first white point and the color value of the second white point do not match, corrects the second matrix so that the color value of the second white point matches the color value of the first white point (column 10, lines 53-65 and figure 9).

12. Regarding claim 15, Hidaka teaches of a second correcting means that, in the event it is determined that the color value of the first white point and the color value of the second white point do not match, corrects the first matrix so that the color value of the first white point matches the color value of the second white point (column 10, lines 53-65 and figure 9).

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13. Regarding claim 20, the structural element of apparatus claim 1 perform all of the steps of method claim 20. Thus, claim 20 is rejected for the same reasons discussed in the rejection of claim 1.

14. Regarding claim 21, Hidaka teaches of a method of color space conversion for converting a color value of a first color space to a color value of a second color space, said method of color space conversion comprising: determining whether the color value of a first white point converted from the color value of the white point of the first color space to a color value of a device-independent color space using a first matrix, matches the color value of a second white point converted from the color value of the white point of the second color space to a color value of the device-independent color space using a second matrix (column 9,lines 58-67 – column 10,lines 1-3); when it is determined that the color value of the first white point and the color value of the second white point match, calculating deviation of the color value of the second white point with respect to a converted value converted to the second color space from the color value of the achromatic color of the first color space using a third matrix created on the basis of the first matrix and the second matrix (column 10,lines 30-42); and conversion accuracy improving means for improving color space conversion accuracy by the third converting means on the basis of the calculated deviation (column 10,lines 38-65).

15. Regarding claim 23, the structural element of apparatus claim 1 perform all of the steps of method claim 23. Thus, claim 23 is rejected for the same reasons discussed in the rejection of claim 1.

16. Regarding claim 24, Hidaka teaches a color space converting program for matching the color value of the white point of a first color space with the color value of the white point of a second color space in a device-independent color space, and converting a color value of the first color space to a color value of the second color space, wherein said color space converting program realizes by means of a computer (column 9, lines 38-43 and 46-50), a function for calculating deviation of the color value of the white point of the second color space with respect to a converted color value that has been converted from the color value of the white point of the first color space to the second color space using a third matrix created on the bases of a first matrix for converting a color value of the first color space to a color value of the device-independent color space and a second matrix for converting a color value of the second color space to a color value of the device-independent color space (column 10, lines 30-42); and a function for improving conversion accuracy improving on the basis of the calculated deviation (column 10, lines 38-65).

17. Regarding claim 25, Hidaka teaches of a color space converting program for converting a color value of a first color space to a color value of a second color space, wherein said color space converting program realizes by means of a computer (column 9, lines 38-43 and 46-50), a function for determining whether the color value of a first white point converting to a device-independent color space from the color value of the white point of the first color space using a first matrix matches the color value of a second white point converted to a device-independent color space from the color value of the white point of the second color space using a second matrix (column 9, lines 58-

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67 – column 10,lines 1-3); a function that, in the event that it is determined that the color value of the first white point and the color value of the second white point match, calculates deviation of the color value of achromatic color of the second color space with respect to a converted value converted to the second color space from the color value of the achromatic color of the first color space using a third matrix created on the basis of the first and second matrix (column 10,lines 30-42); a function for reflecting the calculated deviation to improve the accuracy of the color conversion (column 10,lines 38-65).

18. Regarding claim 27, Hidaka teaches of a method for manufacture of a color space conversion matrix for converting a color value of a first color space to a color value of a second color space (column 9,lines 38-43 and 46-50), said method for manufacture of a color space conversion matrix comprising: executing a matrix operation to convert the color value of the white point of the first color space to a color value of the second color space (column 10,lines 3-30); calculating deviation between the color value of the second color space obtained by executing the matrix operation, and the color value of the achromatic color of the second color space (column 10,lines 30-42); correcting the matrix to reflect the calculated deviation so as to match the converted color value of the second color space with the color value of the achromatic color of the second color space, to calculate a corrected matrix (column 10,lines 30-42); and storing the created color space conversion table in storage means (column 10,lines 3-8).

19. Regarding claim 28, Hidaka teaches the achromatic color of the second color space is white (column 9, lines 63-65).

20. Regarding claim 29, Hidaka teaches of a method for manufacture of a color space conversion matrix for converting a color value of a first color space to a color value of a second color space (column 9, lines 38-43 and 46-50), said method for manufacture of a color space conversion matrix comprising: executing a matrix operation to convert the color value of the white point of the first color space to a color value of the second color space (column 10, lines 3-30); calculating deviation between the color value of the second color space obtained by executing the matrix operation, and the color value of the achromatic color of the second color space (column 10, lines 30-42); correcting the matrix to reflect the calculated deviation so as to match the converted color value of the second color space with the color value of the achromatic color of the second color space, to calculate a corrected matrix (column 10, lines 30-42); executing a matrix operation using the calculated matrix to convert a plurality of color values of the first color space to a plurality of color values of the second color space (column 10, lines 3-30); creating a color space conversion table associating the plurality of color values of the first color space with the plurality of color values of the second color space (column 11, lines 24-36) and storing the created color space conversion table in storage means (column 10, lines 3-8).

21. Regarding claim 30, Hidaka teaches the achromatic color of the second color space is white (column 9, lines 63-65).

Allowable Subject Matter

22. Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

23. Claims 7,11,16,17,22 and 26 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

Any inquiry concerning this communication should be directed to Michael Burleson whose telephone number is (571) 272-7460 and fax number is (571) 273-7460. The examiner can normally be reached Monday thru Friday from 8:00 a.m. – 4:30p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached at (571) 272-7471

KA Williams

**KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER**

Michael Burleson
Patent Examiner
Art Unit 2626

MB